ABSTRACT OF DISCLOSURE

The present invention relates to a method of transmitting data using adaptive coding scheme, which changes channel coding rate of transport blocks (TBs) adaptively in accordance with channel transmission conditions, at physical layer of asynchronous mobile communication system such as W-CDMA or IMT-2000 in order to achieve effective data transmission, and relates to a base station using the method. This method is to apply to a physical layer of an asynchronous mobile communication system where a SRNC consisting of a media access control (MAC) layer and radio link control (RLC) for transmitting channel data and a base station, connected to the SRNC with a wired interface, consisting of the physical layer being in charge of actual data transmission are included. According to this method, a new management module is added over the most upper layer of the physical layer to collect all acknowledgement information for each channel from an opposite physical layer, to determine a puncturing rate suitable to current channel conditions and to report the acknowledgement information to the MAC layer of the SRNC which decides whether to deliver down new TBs to the physical layer based on the received acknowledgement information.